

What is claimed is:

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1. A device for locating inflamed plaque on a vessel wall of a vessel of a patient, the device comprising:
    - at least one receiver insertable into the vessel, the receiver being adapted to receive information from the patient;
    - a positioner for selectively positioning the at least one receiver in the vessel; and
    - a sensor for receiving the information from the receiver and determining the presence of inflamed plaque based upon the information received from the receiver.
  2. The device of claim 1 comprising a plurality of receivers, the receivers being positioned substantially circumferential around the positioner.
  3. The device of claim 1 wherein the positioner positions the receiver near the vessel wall of the patient.
  4. The device of claim 1 wherein the receiver receives infrared radiation from the vessel wall.
  5. The device of claim 1 wherein the positioner includes a positioning guidewire having a movable section which is adapted to be maneuvered in the vessel so that the movable section can be positioned near the vessel wall in the vessel, and the at least one receiver is attached to the guidewire near the movable section.
  6. The device of claim 1 wherein the receiver includes a luminescent material which is positioned proximate to the vessel wall by the positioner and the sensor receives information regarding the emissions from the luminescent material.

7. The device of claim 1 wherein the receiver is adapted to receive sound waves from the vessel wall and the sensor utilizes the information regarding the sound waves to determine the presence of inflamed plaque.

8. The device of claim 1 wherein the sensor monitors temperature  
5 at the at least one receiver to determine the presence of inflamed plaque.

9. A device for measuring temperature in a vessel wall of a vessel  
of a patient, the device comprising:

at least one receiver, insertable into the vessel, for receiving  
information about the vessel wall;

10 a positioner for selectively positioning the at least one receiver  
proximate the vessel wall; and

a sensor for receiving the information from the at least one  
receiver and determining temperature at the at least one receiver  
based upon the information received.

15 10. The device of claim 9 comprising a plurality of receivers, the  
receivers being positioned substantially circumferential around the positioner.

11. The device of claim 9 wherein the positioner positions the  
receiver near the vessel wall of the patient.

20 12. The device of claim 9 wherein the positioner includes a  
positioning guidewire having a movable section which is adapted to be  
maneuvered in the vessel so that the movable section can be positioned near  
the vessel wall in the vessel, and the at least one receiver is attached to the  
guidewire near the movable section.

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13. The device of claim 9 wherein the receiver includes a luminescent material which is positioned proximate to the vessel wall by the positioner and the sensor receives information regarding the emissions from the luminescent material.

5 14. The device of claim 9 wherein the receiver receives sound waves from the vessel wall and the sensor utilizes the information regarding the sound waves to determine the temperature.

10 15. The device of claim 9 wherein the sensor monitors the temperature at the at least one receiver to determine the presence of inflamed plaque.

15 16. A method for determining a temperature at a vessel wall of an vessel, the method comprising the steps of:  
providing a receiver insertable into the vessel, the receiver being adapted to receive information regarding the vessel wall  
advancing a receiver in the vessel;  
transferring the information from the receiver to a sensor; and  
determining the temperature of the vessel wall at the receiver with the sensor.

20 17. The method of claim 16 wherein the step of providing a receiver includes providing a plurality of receivers, the receivers being positioned substantially circumferential around a positioner.

18. The method of claim 16 including the step of positioning the receiver near the vessel wall of the patient.

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19. The method of claim 16 wherein the step of advancing the receiver includes the step of using a positioning guidewire having a movable section which is adapted to be maneuvered in the vessel so that the movable section can be positioned near the vessel wall in the vessel.
- 5 20. The method of claim 16 wherein the step of providing a receiver includes the step of providing a luminescent material adapted for positioning in the vessel.
- 10 21. The method of claim 16 wherein the step of providing a receiver includes the step of providing a receiver adapted for receiving sound waves in the vessel.
22. The method of claim 16 including the step of determining the presence of inflamed plaque with the sensor.
- 15 *Sub 247* 23. A method for locating inflamed plaque on a vessel wall of a vessel of a patient, the method comprising the steps of:
- providing a receiver, the receiver being adapted to receive information about the patient;
- selectively positioning the receiver in the vessel; and
- determining (the presence) of inflamed plaque based upon the information received from the receiver.
- 20 24. The method of claim 23 wherein the step of providing a receiver includes providing a plurality of receivers, the receivers being positioned substantially circumferential around a positioner.
25. The method of claim 23 including the step of positioning the receiver near the vessel wall of the patient.

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26. The method of claim 23 wherein the step of positioning the receiver includes the step of using a positioning guidewire having a movable section which is adapted to be maneuvered in the vessel so that the movable section can be positioned near the vessel wall in the vessel.

5 27. The method of claim 23 wherein the step of providing a receiver includes the step of providing a luminescent material adapted for positioning in the vessel.

10 28. The method of claim 23 wherein the step of providing a receiver includes the step of providing a receiver adapted for receiving sound waves in the vessel.

29. The method of claim 23 including the step of collecting infrared radiation with the receiver.